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BOTANICAL/COMMERCIAL CLASSIFICATION

Viola cornuta/Viola Plant

VARIETAL DENOMINATION

cv. 'Sunvioki'

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BACKGROUND OF THE VARIETY

The genus of *Viola* is *Violaceae* plants and has about  
500 species of annuals, biennials, evergreen, and semi -  
10 evergreen and deciduous perennials found in varied  
habitats in temperature regions worldwide.

Each flower has 5 petals a spurred lower petal, 2  
lateral petals and 2 upward-facing upper petals.

Many cultivars within the genus are informally  
15 referred to as garden pansies, violas they are all  
derived from the complex hybridization of *V.tricolour*,  
*V.lutea*, *V.cornuta*, and other species.

*Viola cornuta* has played an important role in the  
development of garden violas and violettas as a result of  
20 cross breeding with the garden pansy which  
*V.wittorockiana*.

*Viola cornuta* is stem prostrate, Leaves is narrow to  
broad ovate, base cordate to truncate, margin deeply  
segmented.

25 The female parent used in the crossing of 'SUNVIOKI'  
was '9V-39a' which is our breeding line and grown at Omi  
R&D Center of Suntory Flowers Ltd.

The pollen parent used in the crossing of 'SUNVIOKI'  
was 'Alpine Sun', whose seeds were bought from Daiichi  
30 Seed Co., Ltd. (Japan).

BREEDING PROCESS

First of all, crossing between '9V-39a' as female  
parent and 'Alpine Sun' as male parent was conducted at  
35 the Omi R&D Center of Suntory Flowers Ltd. in April 2000.  
In May, some seeds were obtained from the crossing. The  
seeds were sown and grown there. In August, 3 seedlings

were selected in view of having highly spreading habit with yellow petals from 20 seedlings obtained, and propagated by cutting. Those seedlings were carried out a trial by flower potting and bedding from October 2001, at the Omi R&D Center of Suntory Flowers Ltd. Finally one variety was selected in view of having long blooming time. The botanical characteristics of that plant were then examined, using similar variety 'Alpine Spring' and 'Violetto Lune' for comparison. As a result, it was concluded that this *Viola cornuta* plant is distinguishable from any other variety, whose existence is known to us, and uniform and stable in its characteristics. Then the new variety of *Viola cornuta* plant was named 'SUNVIOKI'.

Those of *Viola cornuta* plants, '9V-39a' and 'Alpine Sun' are presently maintained at the Omi R&D Center of Suntory Flowers Ltd., located at 863-1, Aza-Iketani, Omori-cho, Yokaichi-shi, Shiga-ken, Japan.

This new and distinct variety of *Viola cornuta* plant, 'SUNVIOKI', was asexually reproduced by tissue culture at the aforementioned the Omi R&D Center of Suntory Flowers Ltd., and the homogeneity and stability thereof were confirmed.

#### DESCRIPTION

In the following description, the color-coding is in accordance with the Horticultural Color Chart of The Royal Horticultural Society, London, England (R.H.S. Color Chart).

The botanical characteristics of the female parent plant '9V-39a' used in the crossing of 'SUNVIOKI' are as follows.

Plant:

Stemmed or non-stemmed - Stemmed  
Growth habit - Spreading  
Height - 9 cm

Plant cover - 49 cm

Stem:

Length - 36 cm

Branching - Much

5 Pubescence - Present

Leaf:

Overall form - Long oblong

Apex form - Acute

Base form - Acute

10 Serrated, lobed or not - Serrated or lobed

Margin - Serrated or slightly lobed

Length - 1.9 cm

Width - 1.2 cm

15 Color of upper surface - Grayish olive green (R.H.S. 137A)

Color of under surface - Moderate yellow green (R.H.S. 137C)

Variegation - Absent

Leaf luster - Lustrous

20 Vein - Distinct

Petiole length - 1.4 cm

Stipule length - 1.8 cm

Flower:

Peduncle length - 7.5 cm

25 Peduncle thickness - Thin

Peduncle color - Strong yellow green (R.H.S. 144B)

Flower form - Vertically oblong

Flowering direction - Upward

Longitudinal diameter - 3.2 cm

30 Horizontal diameter - 3.0 cm

Ruffle of petal margin - Weakly ruffled

Petal curving - Very weak

Petal number - Single

Flower color - Self-colored

35 <Upper petal>

Form - Round

Size - 1.6×1.6 cm

- Petal color - Self-colored  
Ground color - Pale yellow green (R.H.S. 157A)  
Blotch - Absent  
<Side petal>  
5      Form - Ovate  
         Size - 1.3×1.5 cm  
         Petal color - Self-colored  
         Ground color - Pale yellow green (R.H.S. 157A)  
         Blotch - Absent  
10      <Lower petal>  
         Form - Cordate  
         Size - 1.9×1.9 cm  
         Petal color - Self-colored  
         Ground color - Pale yellow green (R.H.S. 157A)  
15      Blotch - Absent  
         Eye color - Vivid reddish yellow (R.H.S. 14A)  
         Eye size - Medium  
         Thickness of petal - Medium  
         Spur length - Longer than the sepal appendage  
20      Sepal - Short  
         Number of flowers - Many  
Seed:  
         Color - Deep brown  
Physical property:  
25      Flowering time - Late  
         Fragrance - Faint or weak  
         <Resistance>  
         Rain - Strong  
         Cold - Strong  
30      Heat - Medium  
         Disease - Strong  
         Pest - Strong

35      And the botanical characteristics of the male parent  
         plant 'Alpine Sun' used in the crossing of 'SUNVIOKI' are  
         as follows.

Plant:

Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

Height - 8 cm

5 Plant cover - 35 cm

Stem:

Length - 25 cm

Branching - Much

Pubescence - Present

10 Leaf:

Overall form - Long oblong

Apex form - Obtuse

Base form - Acute

Serrated, lobed or not - Serrated or lobed

15 Margin - Serrated or slightly lobed

Length - 2.1 cm

Width - 1.0 cm

Color of upper surface - Grayish olive green (R.H.S.  
137A)

20 Color of under surface - Moderate yellow green (R.H.S.  
137C)

Variegation - Absent

Leaf luster - Matte

Vein - Apparent

25 Petiole length - 2.2 cm

Stipule length - 2.1 cm

Flower:

Peduncle length - 8.0 cm

Peduncle thickness - Thin

30 Peduncle color - Strong yellow green (R.H.S. 144B)

Flower form - Vertically oblong

Flowering direction - Upward

Longitudinal diameter - 3.3 cm

Horizontal diameter - 2.5 cm

35 Ruffle of petal margin - Flat

Petal curving - Weak

Petal number - Single

Flower color - Self-colored

<Upper petal>

Form - Round

Size - 1.1×1.0 cm

5 Petal color - Self-colored

Ground color - Vivid yellow (R.H.S. 9B)

Blotch - Absent

<Side petal>

Form - Ovate

10 Size - 1.2×1.0 cm

Petal color - Self-colored

Ground color - Vivid yellow (R.H.S. 9B)

Blotch - Absent

<Lower petal>

15 Form - Cordate

Size - 1.4×1.3 cm

Petal color - Self-colored

Ground color - Vivid yellow (R.H.S. 9A)

Blotch - Absent

20 Eye color - Vivid yellow (R.H.S. 13A)

Eye size - Small

Thickness of petal - Thin

Spur length - Longer than the sepal appendage

Sepal - Short

25 Number of flowers - Many

Seed:

Color - Deep brown

Physical property;

Flowering time - Late

30 Fragrance - Absent

<Resistance>

Rain - Medium

Cold - Strong

Heat - Medium

35 Disease - Strong

Pest - Strong

The botanical characteristics of the similar variety 'Alpine Spring' used for examination as a comparison are as follows.

5 Plant:

Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

Height - 8 cm

Plant cover - 35 cm

10 Stem:

Length - 25 cm

Branching - Much

Pubescence - Present

Leaf:

15 Overall form - Long oblong

Apex form - Obtuse

Base form - Acute

Serrated, lobed or not - Serrated or lobed

Margin - Serrated or slightly lobed

20 Length - 2.1 cm

Width - 1.0 cm

Color of upper surface - Grayish olive green (R.H.S. 137A)

Color of under surface - Moderate yellow green (R.H.S. 137C)

25 Variegation - Absent

Leaf luster - Matte

Vein - Apparent

Petiole length - 2.2 cm

30 Stipule length - 2.1 cm

Flower:

Peduncle length - 8.0 cm

Peduncle thickness - Thin

Peduncle color - Strong yellow green (R.H.S. 144B)

35 Flower form - Vertically oblong

Flowering direction - Upward

Longitudinal diameter - 3.3 cm

- Horizontal diameter - 2.5 cm  
Ruffle of petal margin - Flat  
Petal curving - Weak  
Petal number - Single  
5 Flower color - Self-colored  
<Upper petal>  
Form - Round  
Size - 1.1×1.0 cm  
Petal color - Self-colored  
10 Ground color - Brilliant yellow green (R.H.S. 2B)  
Blotch - Absent  
<Side petal>  
Form - Ovate  
Size - 1.2×1.0 cm  
15 Petal color - Self-colored  
Ground color - Vivid yellow (R.H.S. 9B)  
Blotch - Absent  
Vein color - Dark reddish purple (R.H.S. 79A)  
<Lower petal>  
20 Form - Cordate  
Size - 1.4×1.3 cm  
Petal color - Self-colored  
Ground color - Vivid yellow (R.H.S. 9A)  
Blotch - Absent  
25 Vein color - Dark reddish purple (R.H.S. 79A)  
Eye color - Vivid yellow (R.H.S. 13A)  
Eye size - Small  
Thickness of petal - Thin  
Spur length - Longer than the sepal appendage  
30 Sepal - Short  
Number of flowers - Many  
Seed:  
Color - Deep brown  
Physical property:  
35 Flowering time - Late  
Fragrance - Absent



<Resistance>

- Rain - Medium
- Cold - Strong
- Heat - Medium
- 5 Disease - Strong
- Pest - Strong

The botanical characteristics of the similar variety  
'Violetto Lune' used for examination as a comparison are  
10 as follows.

Plant:

- Stemmed or non-stemmed - Stemmed
- Growth habit - Spreading
- Height - 6 cm
- 15 Plant cover - 40 cm

Stem:

- Length - 26 cm
- Branching - Much
- Pubescence - Present

20 Leaf:

- Overall form - Long oblong
- Apex form - Obtuse
- Base form - Obtuse
- Serrated, lobed or not - Serrated or lobed
- 25 Margin - Serrated or slightly lobed
- Length - 2.2 cm
- Width - 1.6 cm
- Color of upper surface - Grayish olive green (R.H.S.  
137B)
- 30 Color of under surface - Moderate yellow green (R.H.S.  
137C)
- Variegation - Absent
- Leaf luster - Matte
- Vein - Apparent
- 35 Petiole length - 1.3 cm
- Stipule length - 2.0 cm

Flower:

- Peduncle length - 9.0 cm  
Peduncle thickness - Thin  
Peduncle color - Strong yellow green (R.H.S. 144B)  
Flower form - Vertically oblong  
5 Flowering direction - Horizontal  
Longitudinal diameter - 3.4 cm  
Horizontal diameter - 2.9 cm  
Ruffle of petal margin - Flat  
Petal curving - Weak  
10 Petal number - Single  
Flower color - Self-colored  
<Upper petal>  
Form - Round  
Size - 1.9×1.9 cm  
15 Petal color - Self-colored  
Ground color - Vivid yellow (R.H.S. 9A)  
Blotch - Absent  
<Side petal>  
Form - Round  
20 Size - 1.2×1.1 cm  
Petal color - Self-colored  
Ground color - Vivid yellow (R.H.S. 9A)  
Blotch - Absent  
<Lower petal>  
25 Form - Cordate  
Size - 1.8×1.1 cm  
Petal color - Self-colored  
Ground color - Vivid yellow (R.H.S. 12A)  
Blotch - Absent  
30 Eye color - Vivid yellow (R.H.S. 13A)  
Eye size - Small  
Thickness of petal - Thin  
Spur length - Longer than the sepal appendage  
Sepal - Short  
35 Number of flowers - Many  
Seed:

Color - Deep brown

Physical property:

Flowering time - Late

Fragrance - Absent

5 <Resistance>

Rain - Medium

Cold - Strong

Heat - Medium

Disease - Strong

10 Pest - Strong

#### SUMMARY OF THE NEW VARIETY

The new variety of viola plant named 'SUNVIOKI', which is the first vegetative propagated variety, has a spreading plant habit with very long epigeal stem. The plant height is low and the branching is abundant. The flowers of the new variety are vertically oblonged and very small, and the color of flower is brilliant greenish yellow with vivid yellow eye. The new variety has a high resistance to cold, pests and diseases.

#### BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a photograph giving a partial view of the new variety of *Viola cornuta* plant 'SUNVIOKI' planted in pots.

FIG. 2 is a photograph of flowers of the new variety of *Viola cornuta* plant 'SUNVIOKI'.

#### DESCRIPTION OF THE VARIETY

The botanical characteristics of this new and distinct variety of *Viola cornuta* plant named 'SUNVIOKI' are as follows.

Plant:

Stemmed or non-stemmed - Stemmed

35 Growth habit - Spreading

Height - 8 cm

Plant cover - 75 cm

Stem:

Length - 45 cm

Branching - abundant

Pubescence - Present

5 Leaf:

Overall form - Long oblong

Apex form - Obtuse

Base form - Acute

Serrated, lobed or not - Serrated or lobed

10 Margin - Serrated or slightly lobed

Length - 3.5 cm

Width - 1.7 cm

Color of upper surface - Grayish olive green (R.H.S. 137A)

15 Color of under surface - Moderate yellow green (R.H.S. 137C)

Variegation - Absent

Leaf luster - Matte

Vein - Apparent

20 Petiole length - 2.5 cm

Stipule length - 1.5 cm

Flower:

Peduncle length - 10.0 cm

Peduncle thickness - Thin

25 Peduncle color - Strong yellow green (R.H.S. 144A)

Flower form - Vertically oblong

Flowering direction - Upward

Longitudinal diameter - 3.5 cm

Horizontal diameter - 2.6 cm

30 Ruffle of petal margin - Weakly ruffled

Petal curving - Weak

Petal number - Single

Flower color - Self-colored

<Upper petal>

35 Form - Ovate

Size - 1.8x1.3 cm

Petal color - Self-colored

Ground color - Brilliant greenish yellow (R.H.S. 5B)

Blotch - Absent

<Side petal>

Form - Ovate

5      Size - 1.3×1.1 cm

Petal color - Self-colored

Ground color - Brilliant greenish yellow (R.H.S. 5A)

Blotch - Absent

<Lower petal>

10      Form - Cordate

Size - 1.7×1.8 cm

Petal color - Self-colored

Ground color - Brilliant greenish yellow (R.H.S. 5A)

Blotch - Absent

15      Eye color - Vivid yellow (R.H.S. 13A)

Eye size - Small

Thickness of petal - Thin

Spur length - Longer than the sepal appendage

Sepal - Short

20      Number of flowers - Many

Seed:

Color - Deep brown

Physical property:

Flowering time - Early

25      Fragrance - Faint or weak

<Resistance>

Rain - Medium

Cold - Strong

Heat - Medium

30      Disease - Strong

Pest - Strong

This new variety of *Viola cornuta* plant 'SUNVIOKI' is most suitable for flower bedding and potting, hanging basket and ground cover.

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COMPARISON WITH SIMILAR VARIETY

The new variety of *Viola cornuta* plant 'SUNVIOKI' is different from a similar variety, 'Alpine Spring' in following points,

1. The plant width of 'SUNVIOKI' is wider than that of 'Alpine Spring'.
2. 'SUNVIOKI' has abundant branching compared to 'Alpine Spring' which has less branching.
3. The ruffle of petal margin of 'SUNVIOKI' is weakly ruffled while that of 'Alpine Spring' is flat.
4. 'SUNVIOKI' has self-colored flower while 'Alpine Spring' has multi-colored one.
5. The color of upper petal of 'SUNVIOKI' is R.H.S.5B while that of 'Alpine Spring' is R.H.S.2B.
6. The color of side petal of 'SUNVIOKI' is R.H.S.5A while that of 'Alpine Spring' is R.H.S.9B with R.H.S.79A vein.
7. The color of lower petal of 'SUNVIOKI' is R.H.S.5A while that of 'Alpine Spring' is R.H.S.9A with R.H.S.79A vein.
8. The flowering time of 'SUNVIOKI' is early while that of 'Alpine Spring' is late.

The new variety of *Viola cornuta* plant 'SUNVIOHO' is different from a similar variety, 'Violetto Lune' in following points,

1. 'SUNVIOKI' has abundant branching compared to 'Violetto Lune' which has less branching.
2. The leaf color of upper surface of 'SUNVIOKI' is R.H.S.137A while that of 'Violetto Lune' is R.H.S.137B.
3. The color of upper petal of 'SUNVIOKI' is R.H.S.5B while that of 'Violetto Lune' is R.H.S.9A.
4. The color of side petal of 'SUNVIOKI' is R.H.S.5A while that of 'Violetto Lune' is R.H.S.9A.
5. The color of lower petal of 'SUNVIOKI' is R.H.S.5A while that of 'Violetto Lune' is R.H.S.12A.
6. The flowering time of 'SUNVIOKI' is early while that of 'Violetto Lune' is late.